

**AGRICULTURAL CARBON AND GREENHOUSE GASES:  
MOVING TO MARKETS**

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**SPEECH:** Thank you Madam Secretary. It is an honor to be here with you today as well as the distinguished speakers on this panel. I first met Melissa when she worked on the Hill for Chairman Scott McGinnis; he was in charge of the Healthy Forests Restoration Act. Melissa played a large role in the passage of that bill and many Americans owe her a debt of gratitude for that.

Deforestation accounts for roughly 20 percent of global greenhouse-gas emissions. Because of this, the United States is enhancing its efforts to conserve and expand the world's forests. To do so, we must reduce the threat of wildfire and the resulting emissions from that wildfire, which is also a primary goal of the Healthy Forests Restoration Act.

Much like the Healthy Forests Restoration Act, carbon sequestration is not just about the environment, it is about trade, rural development, foreign relations and good economics. For example, three zero emission FutureGen plants are equal to the carbon sequestered by 1 million acres of bottomland hardwood forests enrolled in the Conservation Reserve Program (CRP) in the Mississippi River Valley. The additional incentives to make CRP work cost \$13.3 million/year over 15 years; three FutureGen plants cost \$5.4 billion and have the same reduction in carbon emissions.

Like CRP and the benefits of it, carbon can be one part in a program that provides a number of ecosystem services for the market. Last month, an 1,800-acre tract of land along the Mississippi River sold for \$3,300/acre, primarily to be used for deer hunting; 15 years ago, one could have purchased that land for \$6-700/acre. The State of Mississippi is suing the City of Memphis over water; water credits might be one solution to that dilemma. It could also be very important to solving the problems of Gulf hypoxia and we will learn more about that later.

Carbon trading is one of the fastest growing specialties in the financial services industry and is expected to grow to \$1 trillion in the next decade. London's *Financial World* says it will be the world's largest commodity.

As we move to markets – for whatever interest – we must first develop the rules by which carbon is sequestered. When it comes to soil, grass and forest carbon, jurisdiction should be the Agriculture Committees and oversight should be provided by the Department of Agriculture. After all, between the committees and the department, they have designed the most successful

private lands conservation programs in the world. Let's continue them.

How we develop carbon programs is very important. It should be about cooperative conservation, wetlands restoration, reducing hypoxia in the Gulf of Mexico, improving habitat for neotropical, migratory birds, threatened and endangered species and producing biomass for energy and biofuels. All of this can be combined on the same acre. Unfortunately, to date, we have not done a very good producing all of these benefits on the same acre.

The financial markets are somewhat ahead of the regulatory mechanisms. The New York Mercantile Exchange (NYMEX), under Jim Newsome's leadership, recently announced the formation of their Green Exchange, which will be a Commodity Futures Trading Commission-regulated exchange. Some of you may know Jim; he is a Mississippian and the former chairman of the Commodity Futures Trading Commission.

As I mentioned, less developed are the rules and regulations for what will legally qualify as a greenhouse gas emission reduction and what won't. I am pleased that the Farm Bill, at the urging of the Bush Administration, has included funding for the development of uniform standards for quantifying environmental services, establishing credit registries and evaluating audit and certification options. That is so important. *USA Today* and London's *Financial Times* recently reported of "companies and individuals spending on carbon projects that have few, if any, environmental benefits." That is a quick way to kill the offset market.

Let me discuss some regulatory items we need to consider that will help us further the carbon market.

From a forests perspective, afforestation, reforestation, forest management, forest products and forest conservation should qualify. But, only if they are clearly defined and transparently measured.

There is a lot of discussion about sustainability. It is the goal, and sequestration under such, should be recognized as a premium, not a prerequisite. In many instances, carbon can be from sustainable lands, as indicated by certification or some other acceptable method.

When it comes to measuring and monitoring, carbon stocks should be measured and monitored in a transparent, scientifically credible manner. A defined level of accuracy and precision should be required to satisfy the market and regulators. However, we should avoid excessive requirements that create costs out of proportion to the value of the carbon credits.

Issues regarding reporting include data requirements and frequency of the reporting. There is a balance among reporting, transparency and the costs of the reporting.

Additionality is the amount of carbon sequestered when one calculates the amount resulting from the project activities as compared to the amount that would have normally occurred without the project. There must be a baseline, or basis, against which carbon stocks can be measured. A base year approach is the most scientifically-based and valid method for determining carbon changes.

Regarding permanence, to the extent practicable, forest carbon credits should be maintained in place for long periods of time. Where that is not possible, short-term contracts (5 to 15 years) should be utilized.

Equivalence and leakage are also important issues. Carbon stock changes are derived from sampling techniques just a like a timber cruise. Therefore, the accuracy of them is lower than the accuracy of an emission measurement. Should carbon estimates be adjusted to account for this? Probably. Each individual registry should account for this. This may be based on the precision of the forest inventory and the growth model for the forest. Most registries require a 10 to 20 percent discount rate, which is an excessive transaction costs to get the necessary assurances. Reducing these transaction costs is a necessary step in making carbon sequestration function efficiently.

The USDA Forest Service is uniquely positioned to enhance the role of forest management in carbon markets. The Forest Service could create a form of insurance. With the creation of a “U.S. Federal Carbon Reserve,” the Forest Service could provide the mechanism by which to reduce transaction costs and in turn create more opportunities for private landowners to participate in the carbon market. The U.S. Federal Carbon Reserve could originate a stream of carbon credits. These carbon credits would be banked to provide guaranteed replacement offsets/carbon credits to forests participating in the U.S. Federal Carbon Reserve System. If a participating farmer or landowner has sold his or her carbon and experienced a loss, those carbon credits lost would be replaced by the Reserve's Bank. The U.S. Federal Carbon Reserve would effectively provide a backstop to the private sector.

Very few days go by that I don't get a call from a landowner wanting to combine a Farm Bill conservation or forestry title program with a carbon sequestration program. The U.S. Department of Agriculture considers all environmental credits generated from one of these titles to be the property of the farmer or landowner. But buyers are not always comfortable with that relationship. Some programs may work well with carbon sequestration (Environmental Quality Incentives Program, Conservation Reserve Program, Healthy Forests Reserve Program) and some programs may not (Grasslands Reserve Program, Wetlands Reserve Program). Developing a carbon program is not necessarily about more funds and more programs. Integration with the existing programs is key. For example, a hardwood/cottonwood interplanting under the CP31 practice in the Conservation Reserve Program massively accelerates the carbon sequestration rate – seven times the sequestration rate of a straight hardwood forest in 15 years. And all this is achieved while significantly improving wildlife habitat and providing feed stock for the production of cellulosic ethanol.

Research is also a key component to moving the market forward. We need a National Carbon Sequestration Research Institute that will:

- (a) Develop and demonstrate optimal methods for sequestering carbon in U.S. forests, grasslands and soils;
- (b) Develop carbon sequestration techniques that restore degraded ecosystems

- including, but not limited to: native prairie, bottomland hardwoods, wetlands, longleaf pine and other ecosystems in need of restoration;
- (c) Monitor and incorporate new carbon sequestration developments in science and commercial applications occurring elsewhere in the world;
  - (d) Monitor treaties, laws and policies to develop new opportunities for the U.S.;
  - (e) Develop and propose appropriate institutional arrangements, business initiatives and related activities to promote and enhance rapid commercialization of carbon sequestration in forests, grasslands and soils by the private sector; and
  - (f) Develop an aggressive outreach and technology transfer program to promote and enhance the commercial application of carbon sequestration technologies throughout the U.S.

This would create a world-class, science-based, multi-disciplinary research, development and applications institute that develops the knowledge and policy advice needed to implement cost-effective greenhouse gas capture, storage and mitigation technologies.

Soils, grasslands and forests can be expected to play a large and necessary role in mitigating climate change before bold new technologies are fully defined, made operational and are able to reduce energy demand and consumption significantly. Permitting more dangerous levels of carbon emissions to be reached – by developed or developing economies – before large new technology is deployed is not acceptable. Thus, the positive impact of enabling enhanced land management is disproportionately large regarding both climate change mitigation and reducing ultimate capitalization costs for the implementation of advanced low-carbon technology.